

REMARKS/ARGUMENTS

Claims 1-8, 10-16 and 18-36, 38, 40, 41 and 43 are pending in this application. By this Amendment, claims 6, 14, 22, 38 and 40 are amended, and claims 9, 17, 37, 39 and 42 are cancelled without prejudice or disclaimer. Claim 6 is amended to incorporate the subject matter of claims 9 and 37, claim 14 is amended to incorporate the subject matter of claims 17 and 39, claim 22 is amended to incorporate the subject matter of claim 42, and claims 38 and 40 are amended for dependency. Thus, it is respectfully submitted that these amendments do not raise new issues. Support for the claims can be found throughout the specification, including the original claims and the drawings. Withdrawal of the rejections in view of the above amendments and the following remarks is respectfully requested.

Entry of the amended claims is proper under 37 C.F.R. §1.116 since the amendments: (1) place the application in condition for allowance (for the reasons discussed herein); (2) do not raise any new issues requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout prosecution without incorporating additional subject matter); (3) satisfy a requirement of form asserted in the previous Office Action; and/or (4) place the application in better form for appeal (if necessary). Entry is thus requested.

I. Rejections Under 35 U.S.C. §102(b)

The Office Action rejects claims 6-8, 10-13, 31 and 32 under 35 U.S.C. §102(b) over Korean Patent No. 1994-0006388 to Yoo. It appears, based on the Examiner's remarks in the Office Action, that it was the Examiner's intention to include claim 37 in this statement of

rejection; however, claim 37 has been cancelled. The rejection, in so far as it applies to the remaining claims, is respectfully traversed.

Independent claim 6 is directed to a filter for a washing machine, including a shaft extending from a bottom of a cap, and a funnel-shaped extension comprising a continuous funnel-shaped solid walled structure extending from a distal end of the shaft, wherein the extension is disposed to confront the opening so as to filter particles in water passing through the filter case, the extension having a protrusion protruding from a side of the extension opposite to the cap, wherein the extension filters particles from water flowing between an outer peripheral edge of the extension and an inner surface of the filter case. Yoo neither discloses nor suggests at least such features, or the claimed combination of features.

Yoo discloses in Figures 5-6 (referred to in the Office Action) a filter 11 including a cap 12, a first disc 17 fitted to the cap 12 by a first connecting bar 13, a second flat, annular disc 19 connected to the first disc 17 by two separate second connecting bars 18, and a third disc 20 connected to the second disc 19 by two separate third connecting bars 21. Particle laden water passes through gaps between the second disc 19 and an inner surface of a case 26, while particles in the water are forced through a center opening in the second disc 19. These particles are captured by the third disc 20, and only water flows out through an outlet 25. The second disc 19 (compared in the Office Action to the claimed extension) necessarily has a hole in its center so that particles can pass therethrough and be caught on the third disc 20. Applicant maintains the previously stated position that the second disc 19 is not solid walled, as is the claimed extension.

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Further, Applicant maintains the previously stated position that the hole in the center of the second disc 19 represents a discontinuity in the structure of the second disc 19. Moreover, the flat, annular shaped disc 19 is not funnel-shaped, as required by claim 6.

Furthermore, Applicant respectfully disagrees with the assertion in the Office Action that the third disc 20 (compared in the Office Action to the claimed protrusion) protrudes from a side of the extension opposite to a side of the extension facing the cap. The third disc 20 is clearly a completely separate element that is connected to the second disc 19 via two separate connecting bars 21. Thus, the third disc 20 does not constitute a protrusion protruding from the second disc 19.

For at least these reasons, it is respectfully submitted that independent claim 6 is not anticipated by Yoo, and thus the rejection of independent claim 6 under 35 U.S.C. §102(b) over Yoo should be withdrawn. Dependent claims 7, 8, 10-13, 31 and 32 are allowable at least for the reasons set forth above with respect to independent claim 6, from which they depend, as well as for their added features.

The Office Action rejects claims 1-13, 22-32 and 35 under 35 U.S.C. §102(b) over German Patent No. 39 22 629 to Beier et al. (hereinafter “Beier”). It appears, based on the Examiner’s remarks in the Office Action, that it was the Examiner’s intention to include claims 36, 38 and 41-43 in this statement of rejection; however, claim 42 has been cancelled. The rejection, in so far as it applies to the remaining claims, is respectfully traversed.

Independent claim 1 is directed to a filter for a washing machine, including a funnel shaped extension extending from an end of the shaft, the extension disposed to confront the opening so as to filter particles from water flowing between the extension and the filter case, the extension having a protrusion protruding from a side of the extension opposite the cap, wherein the protrusion extends away from the cap and has a diameter that is smaller than a largest diameter portion of the extension. The features of independent claim 6 have been set forth above. Independent claim 22 recites similar features in varying scope. Beier neither discloses nor suggests at least such features, let alone the respective claimed combinations of features.

Beier discloses a filter assembly for a washing machine in Figure 1 (referred to in the Office Action). The filter assembly includes a filter chamber 1 closed at one end by a cap 20 having a cylindrical portion 11 that extends into the chamber 1. A filter cartridge 6 is positioned in the cylindrical portion 11, a mesh filter 13 is mounted on the exterior of the cylindrical portion 11, and a labyrinth filter 10 is positioned at an end of the cylindrical portion 11 opposite the cap 20. Water entering through an inlet 4 passes through the mesh filter 13 (depending on a position of the mesh filter 13), into the labyrinth filter 10, and then into the pump 3 and ultimately out through an outlet 5.

The Office Action asserts that a slanted portion of the labyrinth filter 10 is comparable to the funnel shaped extension recited in claim 1, and that a horizontal portion extending from the slanted portion is comparable to the recited protrusion. Applicant maintains the previously stated position that the labyrinth filter 10 has a complex, folded shape that is not conical or

funnel shaped. As would be well understood by one of ordinary skill in the art, water flowing along the cylindrical surface 11 will enter the labyrinth filter 10, reverse direction at the rear wall of the labyrinth filter 10, and then impinge the dish-shaped center of the filter cartridge 6. At the filter cartridge 6, the water will reverse direction again, and flow out through the aperture 9 and into the pump, where it will be discharged through the outlet 5. Beier neither discloses nor suggests that the labyrinth filter 10, and in particular, the slanted portion thereof referred to in the Office Action, is a funnel shaped extension, as recited in independent claims 1, 6 and 22.

However, even if this slanted portion of the labyrinth filter 10 is improperly compared to the claimed extension, the slanted portion referred to in the Office Action extends from an outer periphery of what appears to be a housing of the labyrinth filter 10, and not from a distal end of the cylindrical portion 11 (compared in the Office Action to the claimed shaft). Further, this slanted portion does not appear to actually act as a filter for any of the water flowing through Beier's assembly. Thus, even if this slanted portion of the labyrinth filter 10 is improperly compared to the claimed extension, Beier still neither discloses nor suggests that this slanted portion filters particles from water flowing between this slanted portion and the filter chamber 1. Rather, it appears that water is actually prevented from flowing between the outer sides of the slanted portion of the labyrinth filter 10 and the filter chamber 1. Thus, Beier neither discloses nor suggests an extension that filters particles from water flowing between the extension and an inner surface of a filter case as recited in independent claims 1, 6 and 22.

Further, Beier neither discloses nor suggests a protrusion as recited in independent claim

1. That is, even if the slanted portion of the labyrinth filter 10 is improperly compared to the claimed extension, the horizontal portion (referred to on page 4 of the Office Action as comparable to the claimed protrusion) is clearly positioned on a side of the labyrinth filter 10 facing the cap 20. Beier neither discloses nor suggests that this horizontal portion protrudes from a side of slanted portion that is opposite a side facing the cap 20, as the protrusion recited in independent claim 1.

Claim 6 recites features similar to claim 1 discussed above, but also recites that the extension comprises a continuous funnel-shaped solid walled structure extending from a distal end of the shaft. As explained above, the labyrinth filter 10 of Beier is deliberately constructed so that it is not a continuous solid walled structure. Instead, the labyrinth filter 10 includes apertures that allow water to pass therethrough. For these additional reasons, it is respectfully submitted that claim 6 is allowable over Beier.

Claim 22 includes features similar to claims 1 and 6, and is also allowable over Beier for all the reasons discussed above. For example, as set forth above Beier neither discloses nor suggests the claimed extension. Further, even if the slanted portion of the filter 10 is considered an extension, it is not a conical shaped solid surface having a diameter that increases in a direction extending away from a cap, nor is a largest diameter portion thereof positioned immediately adjacent an opening in a case, as recited in independent claim 22.

Accordingly, it is respectfully submitted that independent claims 1, 6 and 22 are not anticipated by Beier, and thus the rejection of independent claims 1, 6 and 22 under 35 U.S.C. §102(b) over Beier should be withdrawn. Dependent claims 2-5, 7, 8, 10-13, 23-32, 35, 36, 38, 41 and 43 are allowable at least for the reasons set forth above with respect to independent claims 1, 6 and 22, from which they respectively depend, as well as for their added features.

II. Rejections Under 35 U.S.C. §103(a)

The Office Action rejects claims 14-16, 18-21 and 33 under 35 U.S.C. §103(a) over Yoo in view of U.S. Patent No. 6,167,733 to Lee. It appears, based on the Examiner's remarks in the Office Action, that it was the Examiner's intention to include claim 39 in this statement of rejection; however, claim 39 has been cancelled. The rejection is respectfully traversed.

Independent claim 14 is directed to a washing machine that includes a filter loaded in a filter case. The filter includes a cap fitted to the filter case, a shaft extending from a bottom of the cap, and a funnel-shaped extension comprising a continuous funnel-shaped solid walled structure that extends from a distal end of the shaft, the extension disposed to confront the opening to filter particles in water passing through the filter case, the extension having a protrusion protruding from a side of the extension that is opposite to a side of the extension facing the cap, wherein the extension filters particles from water flowing between an outer peripheral edge of the extension and an inner surface of the filter case. As acknowledged in the Office Action and as set forth above, Yoo neither discloses nor suggests such features, or the claimed combination of features.

Further, Lee is merely cited as allegedly teaching a washing machine with a cabinet, a tub, a drum and a filter assembly. Thus, Lee fails to overcome the deficiencies of Yoo with respect to this rejection.

Accordingly, it is respectfully submitted that the rejection of independent claim 14 is allowable over the applied combination and thus the rejection of independent claim 14 under 35 U.S.C. §103(a) over Yoo and Lee should be withdrawn. Dependent claims 15, 16, 18-21 and 33 are allowable at least for the reasons set forth above with respect to independent claim 14, from which they depend, as well as for their added features.

The Office Action rejects claims 14-21, 33 and 34 under 35 U.S.C. §103(a) over Beier in view of Lee. Claim 17 has been cancelled. Further, it appears, based on the Examiner's remarks in the Office Action, that it was the Examiner's intention to include claim 40 in this statement of rejection. The rejection, in so far as it applies to claims 14-16, 18-21, 33, 34 and 40, is respectfully traversed.

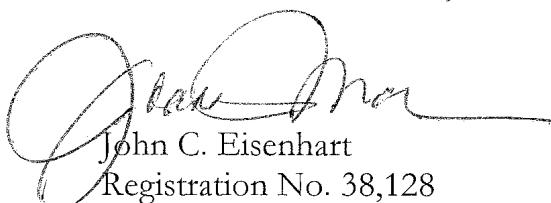
The features of independent claim 14 are set forth above. As set forth above, Beier neither discloses nor suggests at least such features, and Lee fails to overcome the deficiencies of Beier. Accordingly, it is respectfully submitted that independent claim 14 is allowable over the applied combination, and thus the rejection of independent claim 14 under 35 U.S.C. §103(a) over Beier and Lee should be withdrawn. Dependent claims 15, 16, 33, 34 and 40 are allowable at least for the reasons set forth above with respect to independent claim 14, from which they depend, as well as for their added features.

III. Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned **Joanna K. Mason**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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